

### Office Action Summary

**Application No.**

10/700,342

**Applicant(s)**

JOSE ET AL.

**Examiner**

CHUONG T. HO

**Art Unit**

2476

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-26 and 107-115 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-26 and 107-115 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 9-26, 107-108, 109-115, drawn to having a plurality of contiguous regions served by respective fixed stations, classified in class 370, subclass 328.
  - II. Claims 35-44, 103-106 drawn to multiplexing combined with demultiplexing, classified in class 370, subclass 535.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination I has separate utility such as each access point does not requires a wireless input/output (I/O) unit, signal transmission / reception coordination logic. The subcombination I has separate utility such as a wireless input / output (I/O) unit that is configured to establish a plurality of access points; and signal transmission coordination logic that is capable of ascertaining that an access point of the plurality of access points is receiving a signal and that is adapted to restrain at least one other access point of the plurality of access point from

transmitting another signal responsive to the ascertaining that the access point is receiving the signal. The subcombination I has separate utility such as An apparatus comprising: a plurality of inputs adapted to accept a plurality of receive indicators; logic capable of combining the plurality of receive indicators to produce a plurality of constructive receive indicators; and a plurality of outputs adapted to provide the plurality of constructive receive indicators. See MPEP § 806.05(d).

3. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and/or examination burden if restriction were not required because at least the following reason(s) apply:

The search required for Group I, is not required for Group II restriction for examination purposes as indicated is proper.

**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time

of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. During a telephone conversation with Mr. Daniel P. Burke (Telephone: 516-802-0560) on September 28, 2010 a provisional election was made without traverse to prosecute the invention of Group I, claims 9-26, 107-108, 109-115. Affirmation of this election must be made by applicant in replying to this Office action. Claims 35-44, 103-106 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder.

All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

6. Claims 9-26, 107-108, 109-115 are pending.

***Information Disclosure Statement***

7. The information disclosure statement (IDS) submitted on 06/04/2004 was filed. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Claim Objections***

8. Claim 11 is objected to because of the following informalities: IEEE 802.11 standard. Appropriate correction is required.
9. Claims 15-17, 20, 107 are objected to because of the following informalities: "adapted to". Appropriate correction is required. "Adapted to" language is not a limitation and does not constitute any patentable sense.
10. Claims 18, 19, 109 are objected to because of the following informalities: capable of. Appropriate correction is required. "Capable of" language is not a limitation and does not constitute any patentable sense.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 9-20, 107, 108, 109, 111, 114-115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi et al. (Hereafter, Adachi '752) Pub. No.: US 2003/0064752 A1 in view of Griffith et al. (Hereafter, Griffith '104) Pub. No.: US 2002/0031104 A1.

Regarding claim 9, Adachi '752 teaches an access station (i.e., AP 'access point') [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105] for wireless communications, the access station comprising: signal transmission/reception coordination logic (i.e., receiving control unit 13 and transmitting control unit 14) [see Fig. 3] that is capable of ascertaining that an access point (i.e., terminas) [see Paragraph 0102] of the plurality of access points is receiving a signal and that is adapted to restrain at least one other access point (i.e., self station) [see Paragraph 0102] of the plurality of access points from transmitting another signal responsive to the ascertaining that the access point is receiving the signal (i.e., suppressing transmission of frames from the self station, when the received frame is a frame which is used in communications between terminals in the BSS in order to avoid collision) [see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].

However, Adachi '752 does not explicitly teach the access station comprising: a wireless input/output (I/O) unit that is configured to establish a plurality of access points.

Griffith '104, in the same or similar fields of endeavor, teaches access point comprising: a wireless input/output (I/O) unit that is configured to establish a plurality of

access terminals (i.e., the wireless input/output interface 870) [see Fig. 7 & Fig. 8 & Paragraphs 0090 & 0099].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify access point Adachi '752 in view of Griffith '104 because Griffith '104 suggests that it improves data throughput, the size of wireless segment can be determined based on status condition associated with the wireless link, such as bit errors, framing errors, signal strength, signal-to-noise ratios) [see Paragraph 0006].

Regarding claim 10, Adachi '752 and Griffith '104 teach the limitations of claim 9 above.

However, Adachi '752 does not explicitly teach wherein the plurality of access points established by the wireless I/O unit are co-located.

Griffith '104, in the same or similar fields of endeavor, teaches wherein the plurality of access terminals established by the wireless I/O unit are co-located (i.e., the wireless input/output interface 870) [see Fig. 7 & Fig. 8 & Paragraphs 0090 & 0099].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify access point Adachi '752 in view of Griffith '104 because Griffith '104 suggests that it improves data throughput, the size of wireless segment can be determined based on status condition associated with the wireless link, such as bit errors, framing errors, signal strength, signal-to-noise ratios) [see Paragraph 0006].

Regarding claim 11, Adachi '752 and Griffith '104 teach the limitations of claim 9 above.



Adachi '752 further teaches wherein the wireless unit operates in accordance with at least on IEEE 802.11 standard (i.e., MAC frame of IEEE 802.11) [see Fig. 6].

However, Adachi '752 does not explicitly teach the wireless I/O unit.

Griffith '104, in the same or similar fields of endeavor, teaches access point comprising: a wireless input/output (I/O) unit that is configured to establish a plurality of access terminals (i.e., the wireless input/output interface 870) [see Fig. 7 & Fig. 8 & Paragraphs 0090 & 0099].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify access point Adachi '752 in view of Griffith '104 because Griffith '104 suggests that it improves data throughput, the size of wireless segment can be determined based on status condition associated with the wireless link, such as bit errors, framing errors, signal strength, signal-to-noise ratios) [see Paragraph 0006].

Regarding claim 12, Adachi '752 and Griffith '104 teach the limitations of claim 9 above.

However, Adachi '752 does not teach wherein the signal received by the access point comprises at least one up linked packet.

Griffith '104, in the same or similar fields of endeavor, teaches wherein the signal received by the access point comprises at least one up linked packet [see Paragraphs 0014 & 0053].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify access point Adachi '752 in view of Griffith '104 because Griffith

'104 suggests that it improves data throughput, the size of wireless segment can be determined based on status condition associated with the wireless link, such as bit errors, framing errors, signal strength, signal-to-noise ratios) [see Paragraph 0006].

Regarding claim 13, Adachi '752 and Griffith '104 teach the limitations of claim 9 above.

However, Adachi '752 does not teach wherein the signal received by the access point comprises at least a portion of an uplinked packet.

Griffith '104, in the same or similar fields of endeavor, teaches wherein the signal received by the access point comprises at least a portion of an uplinked packet [see Paragraphs 0014 & 0053].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify access point Adachi '752 in view of Griffith '104 because Griffith '104 suggests that it improves data throughput, the size of wireless segment can be determined based on status condition associated with the wireless link, such as bit errors, framing errors, signal strength, signal-to-noise ratios) [see Paragraph 0006].

Regarding claim 14, Adachi '752 further teaches wherein the at least a portion of the uplinked packet comprises at least part of a preamble of the up linked packet (i.e., the MAC frame specified by IEEE801.11 is formed of a MAC header of the maximum of 30 bytes) [see Paragraph 0069].

Regarding claim 15, Adachi '752 further teaches wherein the signal transmission/reception coordination logic is further adapted to restrain at least two other access points of the plurality of access points from transmitting signals responsive to the ascertaining that the access point of the plurality of access points is receiving the signal (i.e., Base station AP 2 determines the base station AP 2 receives a beacon frame from the base station AP1, thus suppresses transmission of frames respectively in order to avoid collision) [see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].

Regarding claim 16, Adachi '752 further teaches wherein the signal transmission/reception coordination logic is further adapted to restrain the at least one other access point of the plurality of access points from transmitting a downlink signal responsive to the ascertaining that the access point of the plurality of access points is receiving the signal (i.e., Base station AP 2 determines the base station AP 2 receives a beacon frame from the base station AP1, thus suppresses transmission of frames respectively in order to avoid collision) [see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].

Regarding claim 17, Adachi '752 teaches wherein the signal transmission/reception coordination logic is further adapted to restrain the at least one other access point of the plurality of access points from transmitting the other signal on a first channel responsive to the ascertaining that the access point of the plurality of access points is receiving the

signal on a second different channel (i.e., Base station AP 2 determines the base station AP 2 receives a beacon frame from the base station AP1, thus suppresses transmission of frames respectively in order to avoid collision) [see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].

Regarding claim 18, Adachi '752 teaches wherein the signal transmission/reception coordination logic is further capable of monitoring the plurality of access points (i.e., Base station AP 2 determines the base station AP 2 receives a beacon frame from the base station AP1, thus suppresses transmission of frames respectively in order to avoid collision) [see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].

Regarding claim 19, Adachi '752 teaches wherein the signal transmission/reception coordination logic is capable of monitoring the plurality of access points to detect received signals (i.e., Base station AP 2 determines the base station AP 2 receives a beacon frame from the base station AP1, thus suppresses transmission of frames respectively in order to avoid collision) [see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].

Regarding claim 20, Adachi '752 teaches wherein the signal transmission/reception coordination logic is further adapted to restrain the at least one other access point of the plurality of access points while the access point is receiving the signal (i.e., Base station

AP 2 determines the base station AP 2 receives a beacon frame from the base station AP1, thus suppresses transmission of frames respectively in order to avoid collision) [see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].

Regarding claim 107, Adachi '752 teaches an access station for wireless communications in a wireless system, the access station comprising: signal transmission/reception coordination logic that is capable of ascertaining that a first access point (i.e., terminal) [Paragraph 0102] of the plurality of access points is receiving a first signal on a first channel and that is adapted to restrain a second access point (i.e., self station) [see Paragraph 0102] of the plurality of access points from transmitting a second signal on a second channel based on the ascertaining that the first access point is receiving the first signal with an ongoing transmission on a third channel to prevent distortion to other signals being wirelessly communicated in the wireless system (i.e., suppressing transmission of frames from the self station, when the received frame is a frame which is used in communications between terminals in the BSS in order to avoid collision) [see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].

However, Adachi '752 does not explicitly teach the access station comprising: a wireless input/output (I/O) unit that is configured to establish a plurality of access points.

Griffith '104, in the same or similar fields of endeavor, teaches access point comprising: a wireless input/output (I/O) unit that is configured to establish a plurality of access terminals (i.e., the wireless input/output interface 870) [see Fig. 7 & Fig. 8 & Paragraphs 0090 & 0099].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify access point Adachi '752 in view of Griffith '104 because Griffith '104 suggests that it improves data throughput, the size of wireless segment can be determined based on status condition associated with the wireless link, such as bit errors, framing errors, signal strength, signal-to-noise ratios) [see Paragraph 0006].

Regarding claim 108, Adachi '752 teaches wherein the prevented distortion comprises inter-modulation distortion (i.e., Base station AP 2 determines the base station AP 2 receives a beacon frame from the base station AP1, thus suppresses transmission of frames respectively in order to avoid collision) [see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].

Regarding claim 109, Adachi '752 teaches an access station for wireless communications In a wireless system, the access station comprising: signal transmission/reception coordination logic that is capable of restraining transmission from the at least one access point (i.e., self station) [see Paragraph 0102] when another access point (i.e., terminals) [see Paragraph 0102] is expecting a short- term response

to a frame that was transmitted by the other access point (i.e., terminals) (i.e., suppressing transmission of frames from the self station, when the received frame is a frame which is used in communications between terminals in the BSS in order to avoid collision) [see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].  
[see Paragraphs 0095 & 0102] [see Paragraphs 0094 & 0095 & 0096 & 0098 & 0099 & 0102 & 0104 & 0105].

However, Adachi '752 does not explicitly teach the access station comprising: a wireless input/output (I/O) unit that is configured to establish at least one access point.

Griffith '104, in the same or similar fields of endeavor, teaches access point comprising: a wireless input/output (I/O) unit that is configured to establish a plurality of access terminals (i.e., the wireless input/output interface 870) [see Fig. 7 & Fig. 8 & Paragraphs 0090 & 0099].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify access point Adachi '752 in view of Griffith '104 because Griffith '104 suggests that it improves data throughput, the size of wireless segment can be determined based on status condition associated with the wireless link, such as bit errors, framing errors, signal strength, signal-to-noise ratios) [see Paragraph 0006].

Regarding claim 111, Adachi '752 and Griffith '104 teach the limitations of claim 109 above.

However, Adachi '752 does not explicitly teach wherein the other access point is also established by the wireless I/O unit of the access station.

Griffith '104, in the same or similar fields of endeavor, teaches wherein the other access point is also established by the wireless I/O unit of the access station (i.e., the wireless input/output interface 870) [see Fig. 7 & Fig. 8 & Paragraphs 0090 & 0099].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify access point Adachi '752 in view of Griffith '104 because Griffith '104 suggests that it improves data throughput, the size of wireless segment can be determined based on status condition associated with the wireless link, such as bit errors, framing errors, signal strength, signal-to-noise ratios) [see Paragraph 0006].

Regarding claim 114, Adachi '752 teaches wherein the at least one access point and the other access point are operating on different channels (i.e., different channel\$) [see Paragraph 0096].

Regarding claim 115, Adachi '752 teaches wherein the different channels are adjacent (i.e., different channel\$) [see Paragraph 0096].

13. Claims 21-26, 110, 112 -113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi et al. (Hereafter, Adachi '752) Pub. No.: US 2003/0064752 A1 in view of Griffith et al. (Hereafter, Griffith '104) Pub. No.: US 2002/0031104 A1, and further in view of Adachi et al. (Hereafter, Adachi '167) Patent No.: US 6,983,167 B2.



Regarding claim 20, Adachi '752 and Griffith '104 teach the limitations of claim 9 above.

However, Adachi '752 and Griffith '104 do not explicitly teach wherein each access point of the plurality of access points corresponds to a communication beam of a plurality of communication beams that emanate from the access station.

Adachi '167, in the same or similar fields of endeavor, teaches wherein each access point of the plurality of access points corresponds to a communication beam of a plurality of communication beams that emanate from the access station (i.e., access point corresponds to a communication beam of a plurality of communication beams that emanate from wireless station 4-1, 4-2, 4-3) [see Col. 6, Lines 24-32, Lines 33-41].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Adachi '752 - Griffith '104) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 22, Adachi '752 and Griffith '104 teach the limitations of claim 9 above.

However, Adachi '752 and Griffith '104 do not explicitly teach wherein each access point of the plurality of access points is associated with a medium access controller/baseband unit pair.

Adachi '167, in the same or similar fields of endeavor, teaches wherein each access point of the plurality of access points is associated with a medium access controller/baseband unit pair [see Col. 6, Lines 24-32, Lines 33-41].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Adachi '752 - Griffith '104) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 23, Adachi '752 and Griffith '104 teach the limitations of claim 9 above.

However, Adachi '752 and Griffith '104 do not explicitly teach wherein the signal transmission/reception coordination logic comprises medium access controller coordination logic.

Adachi '167, in the same or similar fields of endeavor, teaches wherein the signal transmission/reception coordination logic comprises medium access controller coordination logic (i.e., MAC) [see Fig. 5A, Fig. 5B, and Col. 7, Lines 52-67 and Col. 8, Lines 1-30].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Adachi '752 - Griffith '104) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention

to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 24, Adachi '752 and Griffith '104 teach the limitations of claim 9 above.

However, Adachi '752 and Griffith '104 do not explicitly teach wherein the medium access controller coordination logic is physically distributed to link two or more access stations.

Adachi '167, in the same or similar fields of endeavor, teaches wherein the medium access controller coordination logic is physically distributed to link two or more access stations (i.e., MAC) [see Fig. 5A, Fig. 5B, and Col. 7, Lines 52-67 and Col. 8, Lines 1-30].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Adachi '752 - Griffith '104) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 25, Adachi '752 and Griffith '104 teach the limitations of claim 9 above.

However, Adachi '752 and Griffith '104 do not explicitly teach wherein the signal transmission/reception coordination logic operates at a baseband level .

Adachi '167, in the same or similar fields of endeavor, teaches wherein the signal transmission/reception coordination logic operates at a baseband level (i.e., wireless frequency (RF), base band or intermediate frequency (IF)) [see Col. 5, Lines 56-67].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Adachi '752 - Griffith '104) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 26, Adachi '752 and Griffith '104 teach the limitations of claim 9 above.

However, Adachi '752 and Griffith '104 do not explicitly teach wherein the signal transmission/reception coordination logic operates at a radio frequency (RF) level (i.e., wireless frequency (RF), base band or intermediate frequency (IF)) [see Col. 5, Lines 56-67].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Adachi '752 - Griffith '104) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which

communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 110, Adachi '752 and Griffith '104 teach the limitations of claim 109 above.

However, Adachi '752 and Griffith '104 do not explicitly teach wherein the short-term response to the frame comprises an immediate response to the frame.

Adachi '167, in the same or similar fields of endeavor, teaches wherein the short-term response to the frame comprises an immediate response to the frame (i.e., response frame) [see Col. 13, Lines 5-30].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Adachi '752 - Griffith '104) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 112, Adachi '752 and Griffith '104 teach the limitations of claim 109 above.

However, Adachi '752 and Griffith '104 do not teach wherein the other access point is established by a different access station.

Adachi '167, in the same or similar fields of endeavor, teaches wherein the other access point is established by a different access station [see Col. 5, Lines 56-67].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Adachi '752 - Griffith '104) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

Regarding claim 113, Adachi '752 and Griffith '104 teach the limitations of claim 109 above.

However, Adachi '752 and Griffith '104 do not teach wherein the at least one access point and the other access point are operating on a same channel.

Adachi '167, in the same or similar fields of endeavor, teaches wherein the at least one access point and the other access point are operating on a same channel [see Col. 5, Lines 56-67].

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify combined system (Adachi '752 - Griffith '104) and further in view of Adachi '167 because Adachi '167 suggests that It is an object of the present invention to provide a wireless communication system and wireless station by which communication between an access point and plural stations can be efficiently performed even when SDMA is used with CSMA [see Adachi '167, Col. 2, Lines 6-11].

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T. HO whose telephone number is (571)272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sheikh Ayaz can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/CHUONG T HO/  
Examiner, Art Unit 2476

